

REMARKS

The present remarks are responsive to the Official Action mailed August 22, 2003, the shortened statutory response period expiring on November 24, 2003 as November 22 and November 23 fell on a Saturday and Sunday, respectively.

As requested by the Examiner under 37 C.F.R. § 1.83(a), Applicants have shown the computer numeric control system and the pressurized air supply source in Fig. 1. Applicants have also shown the bulk hopper on their own initiative. In addition, Applicants have revised each of the drawings as requested in part 7 and as described in the comments of the draftperson's patent drawing review Form PTO-948 to satisfy the objections under 37 C.F.R. § 1.84 and 1.152. Such amendments include removing the circle designations from the element numbers and designating sectional views with Roman numerals. As evidenced by the attached correspondence dated November 24, 2003, from Chief Draftsperson Bridge B. Gray, the objections under part 11 have been waived. Notwithstanding, Applicants have removed the shading from Fig. 1 for clarification. Applicants trust that each of these actions will satisfy the requirements of the Examiner and the draftsperson. Favorable reconsideration of the drawing objections is respectfully requested.

Several of the claims were rejected under 35 U.S.C. § 112 for being either indefinite, lacking antecedent basis, or failing to claim a positive limitation. Claims 1, 4, 9, 11, and 17 have been amended to address these rejections. Favorable reconsideration is respectfully requested.

Applicants note the Examiner's position with regard to the diaphragm of U.S. Patent No. 3,629,976, issued to Carpenter, Jr. ("Carpenter") in relation to the disclosure of U.S. Patent No. 5,643,058, issued to Erichsen et al. ("Erichsen"). The

Carpenter diaphragm is best shown in the *Carpenter* patent as element 30 of Fig. 3. In general, the *Carpenter* invention includes a feed chamber 12 feeding particulates into a chamber 34 through an outlet 18. The base of the outlet 18 includes a fixed opening 20. A gate 22 having an opening 24 is mechanically connected to the diaphragm 30. When the chamber 34 is not pressurized, a spring 28 forces the gate 22 into the position shown by the phantom lines in Fig. 3, such that opening 24 is generally to the left of outlet 18 when shown in the orientation of Fig. 3. When chamber 34 is pressurized, the internal pressure forces the diaphragm 30 to shift to the right, when viewed in the orientation of Fig. 3. The gate 22 shifts with the diaphragm 30 such that opening 24 of the gate 22 will overlap opening 20 of outlet 18 to permit particles to pass.

When comparing the diaphragm 30 of *Carpenter* and the diaphragm 26 of the present invention (see Fig. 2 of the present invention, for example) it is clear that the diaphragm 30 of *Carpenter* is not "adjacent" to the outlet 18 while the diaphragm 26 of the present invention clearly is.

Applicants have amended claims 1, 9, and 17 to state that the inflatable diaphragm is "arranged adjacent said outlet." The intent of the "adjacent said outlet" language is to indicate that the diaphragm is either immediately in front of the outlet, immediately behind the outlet, or within the outlet, such that there is a common endpoint or border between the outlet and the diaphragm. This differs from the disclosure in *Carpenter* where the diaphragm is only in the general vicinity of the outlet, but is not itself situated to selectively block the flow of abrasive material through the outlet. An inflatable diaphragm "adjacent said outlet," such as that of amended claims 1, 9 and 17 of the present invention is situated to selectively block the flow of abrasive material through the outlet.

Favorable reconsideration of the claim rejections under the *Erichsen* patent in view of *Carpenter* are respectfully requested.

Claims 2, 3, 6-8, 10, 11, 13-16, 18-19, and 20, have been objected to as being dependent upon a rejected base claim. The Examiner has indicated that each of these claims would be allowable if rewritten in independent form to include all of the limitations of the base claims and any intervening claims. Applicants have presented each of these claims in such form as new claims 21 through 38, without additional amendments. Applicants trust that each of these claims is now presented in a condition for allowance.

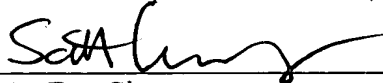
As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: November 24, 2003

Respectfully submitted,

By 
Scott E. Charney
Registration No.: 51,548
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK, LLP
600 South Avenue West
Westfield, New Jersey 07090
(908) 654-5000
Attorney for Applicants

NOV. 24. 2003

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ALFRED DAVID, LITTENB.

NO. 557

P. 2

Form PTO-948 (Rev. 03/01)

Application No.

U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW

The drawing(s) filed (inset date) 2/13/02 are:

- A. ☐ approved by the Draftsperson under 37 CFR 1.84 or 1.152.
 B. ☒ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 for the reasons indicated below. Corrected drawings are required.

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings: Black ink or Color (3 sets required).
 Color drawings are not acceptable until petition is granted. Fig(s) _____
 Pencil and non-ink not permitted. Fig(s) _____

2. PHOTOGRAPHS. 37 CFR 1.84(b)
 1 full-tone set is required. Fig(s) _____
 Photographs may not be mounted. 37 CFR 1.84(e)
 Photographs must meet paper size requirements of 37 CFR 1.84(k). Fig(s) _____
 Poor quality (half-tone). Fig(s) _____

3. TYPE OF PAPER. 37 CFR 1.84(e)
 Paper not flexible, strong, white, and durable. Fig(s) _____
 Exposures, alterations, overwritings, interlineations, folds, copy machine marks not accepted. Fig(s) _____

4. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:
 21.0 cm by 29.7 cm (DIN size A4) or
 21.6 cm by 27.9 cm (8 1/2 x 11 inches)
 All drawing sheets not the same size. Sheet(s) _____
 Drawings sheets not an acceptable size. Fig(s) _____

5. MARGINS. 37 CFR 1.84(g): Acceptable margins:
 Top 2.5 cm Left 1.5 cm Right 1.5 cm Bottom 1.0 cm
 Margins not acceptable. Fig(s) _____
 Top (T) _____ Left (L) _____
 Right (R) _____ Bottom (B) _____

6. VIEWS. 37 CFR 1.84(h)
 REMINDER: Specification may require revision to correspond to drawing changes. e.g., If Fig. 1 is changed to Fig. 1A, Fig. 1B and Fig. 1C, etc., the specification, at the Brief Description of the Drawings, must likewise be changed.
 Views not labeled separately or properly. Fig(s) _____

7. SECTIONAL VIEWS. 37 CFR 1.84(h)(3)
 Sectional designation should be noted with Arabic or Roman numbers. Fig(s) _____

8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)
 Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) _____

9. SCALE. 37 CFR 1.84(k)
 Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction. Fig(s) _____

10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)
 Lines, numbers & letters not uniformly thick and well defined, clean, durable, and black (poor line quality). Fig(s) _____

11. SHADING. 37 CFR 1.84(m)
 Solid black areas pale. Fig(s) _____
 Solid black shading not permitted. Fig(s) _____

12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)
 Numbers and reference characters not plain and legible. Fig(s) _____
 Figure legends are poor. Fig(s) _____
 Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(1) Fig(s) _____
 English alphabet not used. 37 CFR 1.84(p)(2) Fig(s) _____

13. LEAD LINES. 37 CFR 1.84(q)
 Lead lines missing. Fig(s) _____

14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)
 Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Sheet(s) _____

15. NUMBERING OF VIEWS. 37 CFR 1.84(u)
 Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) _____

16. DESIGN DRAWINGS. 37 CFR 1.152
 Surface shading shown not appropriate. Fig(s) _____
 Solid black surface shading is not permitted except when used to represent the color black as well as color contrast. Fig(s) _____

COMMENTS:

Remove O from #15

Reviewer

Jh

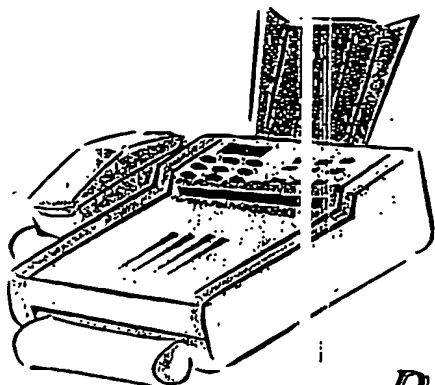
Date

8/14/03

Attachment to Patent No.

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If you have questions call (703) 305-8404.

**FACSIMILE****BRIDGET B. GRAY****CHIEF, DRAFTSPERSON****DRAWING REVIEW BRANCH****OFFICE OF PATENT PUBLICATIONS**908
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7866**PHONE: 703 305-8404****FAX: 703 305-4372****DATE:** 11-24-03**TO:** Scatl Charney**PAGE** 1 **OF** 2**MESSAGE:** _____